

China's Energy Security Strategy: Implications for the Future Sino-U.S. Relations

Yong Soo Park¹

¹ Professor at Korea Maritime and Ocean University, South Korea.

Correspondence: Yong Soo Park, Korea Maritime and Ocean University, South Korea.

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Abstract

This study considers the implications of China's energy security strategy for the future Sino-U.S. relations. Being the world's largest energy consumer, the second largest oil consumer and importer, China has pursued its own energy security strategy since the late 1990s in earnest. In the process of procuring overseas energy resources, however, China has increasingly inclined towards mercantilism, posing a greater threat for the United States. Increasingly concerned about China's overseas energy procurement, the U.S. has reinforced its efforts to block overseas ventures by China's national oil companies (NOCs), thus fueling to the Sino-U.S. conflict around energy procurement. Given the ongoing tension and feud around this issue, it is doubtful that the apparently peaceful relations between China and the U.S. will continue in the future. If China's economic growth and the growth of its energy demands lead to the increase of its defense capabilities, this might be seen as a challenge to the military hegemony of the United States. If this happens, a conflict between the two countries will be inevitable, as evidenced by the history of the past 100 years which shows that the nation states have been inclined to rely on realist competition and conflict rather than liberalist cooperation and peaceful coexistence when it comes to energy procurement.

Keywords: China, United States, Sino-U.S. relations, energy security, energy diplomacy, oil

1. Issues, Problems, and Rationales

Being a strategic commodity, energy is directly linked with political, socio-economic and military stability of a nation state, as well as its sustainable development. Accordingly, almost every nation state in the world regards energy security as the top priority of its national strategy today. Particularly, the so-called 'black gold,' oil, accounts for 40 percent of global energy consumption, and is an essential commodity for national economic development, industrial activities, and modernization. It thereby is a key energy resource linked directly with the survival of a nation state and its people (Herberg 2010, 3). Although the development and exploitation of new renewable energy resources, such as hydrogen, bio-fuel, geothermal energy, wind and solar power, have been under way in the 21st century, oil is expected to remain a key energy resource over the next several decades, possibly for the next one hundred years (Lee and Noh 2011, 120). On account of the scarcity of oil and the great imbalance of its geographical distribution, however, oil importing countries are placed in a zero-sum game in which gains for a certain country mean losses for others, thus causing fierce competition between countries to procure oil.

Energy security can be commonly defined as a "reliable and adequate supply of energy at reasonable prices" (Bielecki 2002, 237), and it requires three main conditions: 1) supply security, i.e., quantitative procurement of adequate amounts of energy, 2) price security, and 3) securing reliable energy suppliers and stable transportation of energy resources (Namkoong 2007, 245). Concerns over energy security, which reached their peak during the oil crises of the 1970s, are being brought to the fore again in the early 21st century. Today the three essential elements for energy security are all being menaced by the threat of energy depletion, the conflicts in the Middle East and Africa, the successive weaponization of oil by oil-rich countries, such as Russia, Iran, Venezuela, and Bolivia, the rapid economic development of the emerging market economies, the global oil supply crisis, and oil price hikes.

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Most countries, except for the oil-rich ones, have concentrated on procuring energy resources by competitively devising a comprehensive energy security strategy aimed at securing stable energy supplies and a secure status in the international energy markets; and China is no exception here. For China, which depends heavily on imported oil, securing stable oil supplies occupies an important place in its national security strategy. Since continuing economic growth is an indispensable condition for China's socio-political stability, as well as a key source of the legitimacy for the Chinese Communist Party, energy procurement is tantamount to a life-or-death battle for Chinese leaders. Against this backdrop, the Chinese government began to devise a comprehensive energy security strategy in the late 1990s, and the strategy has been actualized in earnest in the 21st century.

In the process of actualizing its energy security strategy, however, China has been procuring overseas energy resources on a grand scale through aggressive and indiscriminate energy diplomacy with oil-rich countries all around the world. Since the 2008 global economic crisis, China, by taking advantage of the strong Chinese Yuan and its huge foreign reserves (estimated at over \$3 trillion, the world's largest in 2012), has even set foot in Canada and Australia, regions that have long been deemed American spheres of influence. In the process, China has increasingly inclined towards mercantilism, which stresses national interests and security above compliance with international norms or compromise with other counterparts. The Chinese mercantilist energy security strategy of the 21st century stands in stark contrast to the ways in which other oil-consuming countries depend primarily on market mechanisms to procure stable oil supplies, which suggests that China has regarded the energy issue as a threat to its national security and has begun to see energy security as an issue in the "high politics" of national security, not just the "low politics" of domestic economic policy (Leiberthal and Herberg 2006, 13).

Meanwhile, the issue of energy procurement has emerged as a new potential conflict factor in the Sino-U.S. relations of the 21st century, along with issues like Taiwan, trade conflicts, human rights abuses, and the proliferation of weapons of mass destruction. The U.S., which has often advised China to resort to the international energy markets for dealing with energy supply problems, has been increasingly concerned about China's energy procurement strategy and energy diplomacy, in particular. The Middle East, Africa, Central Asia, and Latin America, into which China has been penetrating to solve its energy supply shortages, are regions where American influence has traditionally been strong. As such, China's increasingly strong presence in these regions is considered a challenge to U.S. energy hegemony. China's energy diplomacy, which involves indiscriminate economic and military aid, as well as the provision of advanced weaponry and technologies, is posing a greater threat to the U.S. government since these practices can undermine and dampen U.S. global strategies and security. In sum, the growing rivalry and tensions between China and the U.S. around the issue of energy procurement are now becoming an important geopolitical factor in the sense that they can escalate into a diplomatic and military conflict or even, in the worst case scenario, to an all-out war between the two countries.

Having said that, the purpose of the present study is to examine the following questions: What is the overall status of China's energy demands and supply? What are the main characteristics of China's energy security strategy in the 21st century? And what are the implications of the Chinese energy security strategy for the future Sino-U.S. relations?

2. Overall Status of China's Energy Demands and Supply

Since a set of gradual and moderate reforms and opening were embarked upon immediately after Deng Xiaoping rose to power after Mao Tse-tung's death in 1976, the Chinese economy has grown at an average of 9.8% annually over the past 30 years. But China's rapid growth and industrialization, as well as its rapid urbanization and improvement in living standards, have resulted in an explosive growth in its energy demands. Between 2000 and 2010, the growth in China's energy consumption added the equivalent of two Latin Americas to the global energy demand (Herberg 2011, 1). China is now the world's largest energy consumer, exceeding U.S. energy consumption, which had led the world for over half a century (Ibid.). China's oil consumption doubled in the 1990s and doubled again in the decade up to 2010, making the country the second largest oil consumer and importer after the U.S. China has already announced its firm commitment to increase its GDP by 2020 to a level four times greater than that in 2000 (Park 2006, 13). Given that, it is certain that China's energy consumption will skyrocket even further in the future, making the country a massive black hole in the international energy markets.

In fact, China has been one of the world's largest oil producers. China holds about 20.4 billion barrels of proven oil reserves as of January 2012, the highest in the Asia-Pacific region (EIA 2012, 2). Until 1992, China had been self-sufficient in energy and had been a net oil exporter. With its dependence on imported oil being negative, China had had no need to store up oil strategically what so ever. However, the gap between oil production and oil consumption in China has rapidly expanded since 2000 as the country's oil production in its domestic oilfields has been increasingly sluggish. Discovered in the 1960s and 1970s, most of China's domestic oilfields, including the three largest oilfields, Daqing, Shengli and Liaohe, have already reached a stage of depletion, and output is expected to decline significantly in

the coming years (EIA 2012, 5). Although China's oil production in its western areas and its offshore oilfields appears to be increasing recently, a substantial increase in its domestic oil production is very difficult to expect, which means that China's dependence on foreign oil will increase further in the future, thus posing a greater threat to the country's energy security.

As of 2011, China is the world's second-largest consumer and importer of oil after the United States. Since 1993, China's dependence on imported oil has rapidly increased. It exceeded the 50 percent mark in 2009 for the first time, and increased further to 52.1 percent in 2010 (Table 1). The U.S. Energy Information Administration (EIA) currently expects the figure to jump to 70 percent by 2020 and 75 percent by 2030 (Table 1). Given this, there is no question that the future of China will depend on stable oil supplies and prices.

Table 1. Trends of China's Dependence on Imported Oil

Year	1994	1995	1996	1997	1998	2000	2005	2010	2020*	2035*
%	1.9	5.4	8.1	17.0	15.4	30.0	35.7	52.1	70.0	75.0

Note: * is the estimate.

Sources: IEA (2012; 2011) and Park (2012, 3).

China has been depending heavily on the Middle East and Africa for its oil imports since the country became a net oil importer in 1993. As of 2012, the Middle East accounts for 51 percent, Africa 24 percent, Asia 3 percent, and elsewhere 22 percent of China's oil imports (Table 2). For a long time, the Middle East has been very unstable politically and socio-economically. Since almost 40 percent of the world's oil passes through the Strait of Hormuz in the Persian Gulf, the political instability in this region leads directly to the instability of global oil supplies. On account of this very reason, China has attempted to diversify its oil supplies from the Middle East to elsewhere since the early 21st century. Nonetheless, the Middle East still remains the largest source of China's crude oil imports, and China's heavy dependence on the region is likely to continue for a long time. This is due largely to the facts that the Middle East has the world's largest oil reserves, its development costs are far cheaper relative to other regions in the world, and the quality of its oil is superb.

Table 2. Trends of China's Crude Oil Imports by Region

Region	1998	2002	2006	2012
The Middle East	61	50	38.5	51
Africa	8	23	24	24
Asia	20	17	16.3	3
Others	11	11	21.2	22

Sources: BP (2012) and EIA (2012).

3. Characteristics of China's Energy Security Strategy

The basic goal of China's energy policy is to stably supply energy resources necessary for achieving sustainable growth of the Chinese economy and modernization process. To achieve this goal, China has largely pursued the following four strategies: 1) increasing the capacity of strategic oil reserves, 2) securing crude oil produced in the Middle East as well as diversifying oil supplies from the Middle East to other regions, 3) securing oil supplies through safer land routes, and 4) procuring China's own energy resources through overseas ventures.

Firstly, strategic oil reserves are a measure aimed to help shield a country from potential oil supply disruptions that can happen unexpectedly, but China's capacity for strategic oil reserves has been very small relative to that of advanced countries like the U.S. and Japan. While China's dependence on foreign crude oil is very large, the issue of strategic oil reserves was only discussed for the first time in China's 10th 5-Year Plan (2000-2005). According to the plan, the Chinese government decided to embark on a state-administered strategic oil reserve program (SPR) in three phases, and in 2004 it began construction on four sites that would comprise the first phase of its strategic oil reserve program. Phase 1, which was completed in 2009, has a total storage capacity of 103 million barrels at four sites, and Phase 2, which was recently completed at eight sites, is expected to more than double the total SPR capacity to 315 million barrels by 2013 (EIA 2012, 13). Strategic oil reserve facilities have been under construction primarily in the eastern part and the northwest region of China. If Phase 3 sites are completed by 2020, China's total strategic oil reserve capacity is expected to increase to about 500 million barrels (Ibid.).

Secondly, China has not only focused on the reinforcement of the relationship with oil producers in the Middle East, such as Saudi Arabia and Iran, but also strengthened strategic oil cooperation and energy diplomacy with oil producers

in Africa (e.g. Angola, Sudan), Central Asia (e.g. Russia, Kazakhstan), the Far East, and Latin America (e.g. Venezuela), in an attempt to diversify its oil supplies which are currently concentrated heavily in the Middle East. The Caspian Sea, in particular, is so rich in oil deposits that it is often called 'the Persian Gulf in Central Asia,' and China's NOCs have managed to penetrate into the region through the strong support of the Chinese government.

Thirdly, China has actively sought to construct transnational oil pipelines, in order to reduce the risk of sea transportation of crude oil. From the standpoint of oil importing countries like China, securing safe oil transport routes is no less important than securing oil itself. The oil would be completely useless if they cannot bring it into their territories safely, even though they have procured it. China's sea transport routes are largely as follows: 1) the Middle East-the Strait of Hormuz-the South China Sea-China, 2) Western Africa-Cape of Good Hope-the Strait of Malacca-the South China Sea-China, 3) Northern Africa-the Strait of Malacca-the South China Sea-China, 4) Southeast Asia-the South China Sea-China, and 5) Latin America-China. About 80 percent of crude oil imported from the Middle East and Africa comes into China by oil tankers via the Indian Ocean, the Strait of Malacca and the Taiwan Strait. Therefore, there is no doubt that the Strait of Malacca is extremely important to China. A narrow, 805 km stretch of water between the Indonesian island of Sumatra and the Malay Peninsula, the Strait of Malacca is the main shipping channel between the Indian Ocean and the Pacific Ocean.

The Strait of Malacca, together with the Taiwan Strait, is well known for frequent accidents that have taken place, like typhoons, earthquakes, tsunamis, and piracy. However, China has been increasingly concerned about the Malacca Strait route not because of those hazards, but because of the fact that the country's potential enemy, the U.S., has been literally controlling the Malacca Strait (Cha 2008, 291). The Strait of Malacca has been under joint management by Indonesia, Malaysia and Singapore since 1971 (Herberg 2010, 3), but the strait is practically controlled by the U.S. (Zweig and Jianhai 2005). The U.S. currently deploys more than 320,000 military personnel in the Asia Pacific region, including 60 percent of its navy (*The Daily Reckoning* 28 January 2013). It has its military bases in Japan, South Korea, Thailand, Malaysia, Singapore, the Philippines, the Marshall Islands, Guam and Australia, and deploys aircraft carriers and warships around these countries, as well as the Indian Ocean, the Strait of Malacca, the South China Sea, and the Pacific Ocean. In short, the Indian Ocean, the Strait of Malacca and the South China Sea, which China's imported crude oil passes by, are practically controlled by the U.S.

On the contrary, China still has a long way to go before securing military or diplomatic power enough to protect the sea transport routes in these regions by itself. Although China has recently reinforced its claims for territorial rights in Taiwan, the East China Sea and the South China Sea, and sought to establish its military bases in these regions since 2010, China is still incapable of protecting the sea transport routes all the way from the Middle East to the South China Sea. While China has recently commissioned its first aircraft carrier, the U.S. already has 10 aircraft carriers in service and dominates the world's sea. Furthermore, although China has increased its defense spending by double-digit percentage every year for the past decade, the quality of its military is estimated to be far inferior to that of the U.S. military in almost all aspects (Lee 2012, 70-72).²

From the standpoint of China, which is emerging as a new rival to the U.S., the fact that the exclusive control of the transport route of crude oil around the Strait of Malacca is held by the U.S. must be a serious security threat. For there always exists a possibility that the U.S. may carry out an 'energy containment policy' against China, thus adversely affecting the economic development and modernization of China, whose dependence on imported oil is very high (Cha 2008, 291). Often referring to this 'Malacca Dilemma,' facing China, the former Chinese President Hu Jintao once raised the issue of securing a stable energy transport route for China as the top security priority (Zweig and Jianhai 2005). In sum, China's ongoing efforts to construct transnational oil pipelines are underway to procure stable energy supplies without being adversely affected by a U.S. naval blockade, aside from the economic benefits such as the retrenchment of transport costs stemming from geographical advantages.

So far, China has constructed three transnational oil pipelines with its three neighboring countries, Kazakhstan, Russia and Myanmar. China's first direct oil import pipeline allows oil imports from Central Asia. The Sino-Kazakhstan oil pipeline runs from Kazakhstan's Caspian shore to Xinjiang in China. The construction of the oil pipelines was agreed to between China and Kazakhstan in 1997, and completed in three phases.³ The total length of the oil pipeline is 2,228 kilometers (1,384 mi), and the pipeline delivers 200,000 tonnes of crude oil per day to China under a 30-year supply deal (Kim, S. J. 2012, 30-31). The construction of the Sino-Russian oil pipeline has been under way in two stages, with

² China currently ranks second in the world after the U.S. in terms of military expenditure, and is about to rank second in terms of military strength, surpassing Russia.

³ The first section of pipeline from Aktobe region's oil field to the Atyrau in the Caspian Sea was completed in March 2003. The construction of pipeline from Atasu to Alashankou was completed in December 2005. The construction of Kenkiyak-Kumkol section was completed in July 2009.

the first stage of the construction completed in December 2009. The oil pipeline became operational in January 2010, and delivers up to 300,000 bbl/d to the Chinese border under a 20-year supply deal (EIA 2012, 10). The second stage of the construction is expected to be completed in 2014-2015. The construction of the Sino-Myanmar oil pipeline, linking Myanmar's deep-water port of Sittwe with Kunming in Yunnan province of China, was agreed to in March 2009, and is expected to be completed in 2013 (EIA 2012, 10). The oil pipeline will be nearly 800 kilometers (497.1 mi) long, and have a capacity of 440,000 barrels of crude oil per day and 12 billion cubic meters of natural gas per year (*The National* 21 May 2013). China also currently plans to construct the Sino-Pakistan oil pipeline, linking Gwadar Port on the southwestern coastline of Pakistan with Xinjiang in China, and the China-India-Iran oil pipeline, which will be 2,560 kilometers (1,590.7 mi) long (Kim, S. J. 2012, 5). Once the construction of these oil pipelines are completed, China is expected to be able to import crude oil and natural gas directly from the Middle East, the Persian Gulf, and Africa via the safer land routes, bypassing the potential choke point at the Strait of Malacca.

Lastly, China has sought to procure its own overseas energy resources through active overseas ventures, so as to make itself independent of U.S.-led international energy markets. China's overseas ventures have been carried out primarily by the Chinese NOCs through such methods as joint oilfield development, joint ownership of production, acquisition of oilfield exploitation rights, and the purchase of shares and M&A of foreign oil companies. China is currently taking advantage of the global economic downturn to step up its global acquisitions and use its vast foreign exchange reserves to help buy equity in projects or acquire stakes in energy companies.

The origin of China's ongoing efforts to accelerate its overseas ventures can be traced back to the 'China Energy Policy' issued by the Chinese Prime Minister, Li Peng, in May 1997, which recognized the seriousness of the country's energy problem for the first time and contained a number of government strategies to deal with it. The policy report stated that China needed to rely on two markets (domestic and overseas) and two kinds of energy resources (oil and natural gas) for the development of the crude oil sector, and adopted a 'Going Abroad' campaign as a strategic move. The following year, the newly inaugurated Chinese Prime Minister, Zhou Rongji, reaffirmed the 'Going Abroad' campaign as part of China's global strategy, and designated 1) Central Asia and Russia, 2) the Middle East and Northern Africa, and 3) Latin America as the 'three strategic regions' (Yi-Chong 2006, 274). The active overseas ventures by the Chinese NOCs since 2000 are the direct outcome of this policy.

A variety of diplomatic, political and economic means have been used by the Chinese government to facilitate overseas ventures by its NOCs, ranging from summit diplomacy to frequent visits to oil-rich countries by high-ranking government leaders, development aid, loans, debt relief, arms exports, etc.⁴ Taking advantage of its status as a permanent member of the U.N. Security Council, China has even sent political support to those regimes that commit crimes against humanity (e.g. Sudan), harbor nuclear ambitions and sponsor terrorism (e.g. Iran), and are rife with corruption (e.g. Angola), and wielded a veto on sanctions against them at the U.N. Security Council meetings. China's desire to secure overseas energy resources was clearly evident when the former Chinese President Hu Jintao, upon taking office in 2003, visited oil-rich countries in Africa and Latin America first before visiting the U.S. and Europe.

China's NOCs have actively taken advantage of the Chinese government's diplomatic and other assistance because it benefits their overseas ventures tremendously.⁵ With strong state support, the NOCs have been able to acquire overseas energy development rights or foreign energy assets on a large scale (Chun 2006, 784). Between 2002 and the first quarter of 2011, the NOCs invested over \$75 billion in overseas oil and gas assets (Kim, K. S. 2012, 6), and between 2000 and 2011, China's overseas equity oil production jumped from 140,000 bbl/d to over 1.5 million bbl/d (EIA 2012, 7). Without a doubt this success is a direct outcome of the synergetic effect between the Chinese government's active support and the NOCs' aggressive expansion strategy.

5. Implications for the Future Sino-U.S. Relations: The Coming Conflict?

It is the Iraq war following the 9/11 terror attacks that made the Chinese leaders acutely aware of how important energy security was (Chun 2006, 776). In 1997, the CNPC signed a \$13 billion contract with Saddam Hussein's government to develop the Al Ahdab oilfield in central Iraq, and began negotiations for the Al Halfayah oilfield, waiting for the

⁴ For example, China has committed \$75 billion on aid and development projects in Africa in the past decade, which is roughly similar in size to that provided by the U.S. (*The Guardian* 29 April 2013).

⁵ China's overseas venture has been undertaken largely by its three major NOCs - the China National Petroleum Corporation (CNPC), the China National Offshore Oil Corporation (CNOOC), and the China Petroleum and Chemical Corporation (Sinopec). Between 1994 and 1998, the Chinese government reorganized most state-owned oil and gas assets into the three vertically integrated firms - CNPC, CNOOC and Sinopec. Accounting for about 60 percent and 80 percent of China's total oil and gas output respectively, CNPC is the leading upstream player in China (EIA 2012, 3). Sinopec, on the other hand, has traditionally focused on downstream activities, such as refining and distribution which account for nearly 80 percent of the company's revenues in recent years (Ibid.). CNOOC is another state-owned oil company which is responsible for offshore oil exploration and production.

sanctions against Iraq to be lifted (Ziegler 2006, 9). But all these contracts came to naught after the war in Iraq, and China became keenly aware of the U.S.'s impact on its energy security. They began to seriously worry about the possibility of China's oil imports being put under U.S. control and other global oil majors (Park 2012, 5-6). In fact, in the early stages of the Iraq war, China had agreed with the war aims of deterring state-sponsored terrorism by Iraq and its development of WMDs. However, after a series of anti-terror measures taken by the U.S. following the war manifested themselves as part of the U.S. intention to secure energy resources and restructure the supply system of global energy through the expansion of its influence on the entire Middle East and Central Asian region, there was a widespread feeling among the Chinese leadership that the U.S. was trying to establish an energy supply system advantageous to the U.S. only.

Indeed, what the U.S. has done after 9/11 appears to support this. The U.S. has created alliances with countries in the Baltic Sea region as well as the southern Eurasian continent, and installed its military bases there. In the course of its preparations for the wars in Afghanistan and Iraq, and NATO's expansion to the Caucasian region after declaring war on terror, the U.S. completed the construction of a magnificent militarized sphere of influence in the whole of Eurasia, starting from the Baltic states in the west to Germany, the Czech Republic, Slovakia, Hungary, Rumania, Bulgaria, Turkey, Iraq, Kuwait, Saudi Arabia, Bahrain, Qatar, the Persian Gulf, the Arabian Sea, the Indian Ocean, Afghanistan, Kazakhstan and Azerbaijan in Central Asia. What is interesting is that the belt of the U.S.'s militarized sphere of influence coincides with the points where the existing U.S. oil pipelines, and new ones currently under construction, pass through in the Middle East and the Caspian Sea. This area accounts for about two thirds of the global oil reserves. Furthermore, the U.S. created the U.S. Africa Command (AFRICOM) in 2007, which is responsible for U.S. military operations and military relations with 53 African countries. The U.S. government announced that AFRICOM was created in order to carry out the war on terror effectively and swiftly, but the real aim is to secure oil resources in Africa, which were beginning to gain global attention (Park 2010, 243-244). Through its strategic efforts after 9/11, the U.S. is now able to control strategic footholds in the Middle East and the Caspian Sea, as well as Africa, both directly and indirectly, thus securing a position to be able to wield monopolistic clout for oil resources worldwide, except for Russia. In other words, through the war on terror the U.S. has succeeded in not only restructuring the political order of the Middle East, but also securing control over the global energy supply system.

Meanwhile, the U.S. government has had a keen interest on the circumstances in which China has been acquiring overseas energy resources through its own energy diplomacy and cooperation without going through the international energy markets. For instance, an investigation into the China-Iran energy cooperation was started under the Bush Administration (Park 2010, 241). A report presented to the U.S. Congress in 2002 pointed out that a U.S.-China war for energy security is inevitable, and accordingly an investigation into the impact of China's massive oil demands upon U.S. energy supplies was embarked on by the U.S. Congress. Since then, using the expression 'China energy threat,' the U.S. has reinforced its efforts to block overseas ventures by China's NOCs, thus fueling the Sino-U.S. conflict around the issue of energy security (Wu and Liu 2007).

For example, two months after Sinopec and CNOOC signed a contract to purchase a 16 percent stake from the British BG Group in the North Caspian Sea oil and gas project in Kazakhstan in March 2003, the U.S. consortium member ExxonMobil blocked the sale by exercising its pre-emption rights (*The New York Times* 17 May 2003). Similarly, CNOOC sought to acquire the U.S. oil firm Unocal in June 2005 by making an unsolicited, all-cash bid of \$18.5 billion, which was higher than \$16.5 billion proposed by Chevron two months earlier, but the ferocious opposition from U.S. lawmakers ultimately derailed CNOOC's bid. On 30 June 2005, the U.S. House of Representatives overwhelmingly approved a resolution declaring that CNOOC's takeover of Unocal would threaten to impair the national security of the U.S. and warranting a thorough review by President George W. Bush. On 27 July 2005, the U.S. Congress also amended the Energy Policy Act of 2005, requiring the U.S. Department of Energy, the Department of Homeland Security, and the Defense Department to conduct a 120-day study on how China's growing energy demands would affect the economic and national security interests of the U.S. (Wan and Wong 2009, 6). CNOOC's unsuccessful takeover of Unocal, as well as follow-up measures taken by U.S. lawmakers afterwards, clearly shows that the U.S. regards energy security as a key issue of national security in its relations with China and that there is also a widespread fear of the 'China energy threat' among Americans in general. Lastly, the U.S. had been trying to stymie the construction of the Sino-Kazakhstan oil pipeline since before the construction project began, and even after the construction was completed, the U.S. attempted to block the pumping of oil through the pipeline by pressuring the Kazakhstan government (Kim, S. J. 2012, 40).

It is not exactly clear whether the Chinese threat theory has been actually reflected in U.S. foreign policy, but much evidence suggests that that may be the case. For instance, the U.S. has not only completed the construction of its militarized sphere of influence, which encircles China militarily by building new military bases or refurbishing old ones in extensive areas ranging from South Korea and Japan to Southeast Asia, Oceania, India and Central Asia, but it has

also enhanced its military ties with the countries in Central Asia and the Asia-Pacific region which border China, e.g. Mongolia, Vietnam, Singapore, India and Myanmar. It has also reaffirmed its existing mutual defense treaties with Thailand, the Philippines, South Korea and Japan after declaring the war on terror. Despite the absence of a mutual defense treaty or a diplomatic relationship with Taiwan, the U.S. has also continuously provided advanced weaponry to Taiwan, which China has claimed as 'a core security concern' since 1949. Furthermore, in the recent territorial disputes over several island groups in the South China Sea⁶ between China and several Southeast Asian countries, the U.S. publicly supported the latter's position, citing the U.N. Convention on the Law of the Sea, which allows free navigation within the 200-nautical mile 'Exclusive Economic Zone,' even though China already notified the U.S. government that the South China Sea was a 'core security concern for China' in early March 2010 (*CNN* 28 June 2011).⁷ When diplomatic and military tensions over a similar dispute between China and Japan regarding a group of uninhabited islands in the East China Sea, called the Diaoyu by the Chinese and the Senkaku by the Japanese, escalated recently, the U.S. sided with the Japanese government's position, citing that the disputed islands belonged to Japan (*The Wall Street Journal* 5 February 2013). Meanwhile, in early January 2012, announcing a new U.S. national defense strategy for the 21st century, U.S. President Obama designated China, along with North Korea and Iran, as a biggest potential enemy that the U.S. would likely to face in the coming years, and pledged to increase the U.S. military presence throughout the Asia-Pacific region by 2020 with the aim of containing China's rise (U.S. Department of Defense 2012, 2). Given all the measures taken by U.S. foreign policy leaders in recent years, it is clear that the U.S. government has begun to regard China's rise to great-power status as a threatening development. Accordingly as China has begun to increasingly challenge the U.S. energy hegemony, the U.S. has begun to attempt to restrain and contain China (Park 2012, 10).

Therefore, China's foreign policy in the 21st century surrounding energy security can be best understood in terms of its strategic moves to counter and block the U.S.'s China containment policy which is aimed at encircling and isolating China both economically and militarily. For example, in 2001 China founded the Shanghai Cooperation Organization (SCO), which consists of China, Russia, Kazakhstan, Kyrgyzstan, Tajikistan, and Uzbekistan, with a primary aim of enhancing China's influence and power in Central Asia and securing rich energy resources in the region. In recent years China has managed to utilize the SCO in forming an anti-U.S. front in Central Asia. Through the SCO, China succeeded in closing down U.S. military bases in Uzbekistan in 2005 and Kyrgyzstan in 2009. Since 2003, a number of SCO joint military exercises have been held, and the main target of the military exercise for China is definitely the U.S.'s China containment policy. China's decision to construct the Sino-Kazakhstan oil pipeline, which was completed in 2009, can also be understood as a strategic move to undercut the geopolitical significance of the U.S.-backed Baku-Tbilisi-Ceyhan (BTC) oil pipeline⁸ and to counter the energy hegemony of the U.S., which has been dominating energy supplies and diplomatic affairs in Central Asia (Kim, S. J. 2012, 62). In the course of constructing the Sino-Kazakhstan oil pipeline, China reinforced its military ties with Kazakhstan as a pretext to protect the oil and the pipeline in the region, and after the construction of the oil pipeline was completed, China even sought to persuade the Azerbaijan government to pump its oil in the opposite direction to the existing BTC pipeline and to connect its oil pipeline with the Sino-Kazakhstan pipeline in lieu of the BTC pipeline.

China has also reinforced its relations with Russia primarily as part of its strategic moves to counter the U.S.'s China containment policy in the Asia-Pacific region. Being an energy powerhouse that is the second largest oil producer and exporter in the world after Saudi Arabia, Russia was America's previous enemy during the Cold War, and still remains a country with very strong anti-American sentiments. Upon taking office in 2003, former Chinese President Hu Jintao chose Russia as his first foreign official visit, and since then China has maintained a very strong strategic partnership with Russia in almost all fields, ranging from the politics to the economy, energy, military, diplomacy and culture. In particular, China has held large-scale war games with Russia under the auspices of the SCO in the waters near Vladivostok and the Shantung Peninsula, as well as in the Central Asian region, in 2005, 2007, 2009, 2012, and 2013. These can be seen largely as a strategic move to counter the U.S.'s military alliance structure in Northeast Asia and the Western Pacific Ocean. The construction of the Sino-Russian oil pipeline, which began pumping in 2011, also reflects China's intent to economically, geopolitically and militarily counter and curb the U.S. hegemony in the Asia-Pacific region (Kim, S. J. 2012, 8).

⁶ Little more than rock formations, the islands possess hardly any value in and of themselves, but they are believed to sit astride vast undersea reserves of oil and natural gas, as much as 213 billion barrels which rivals Saudi Arabia's reserves (*CNN* 28 June 2011).

⁷ Previously, China mentioned Tibet, Xinjiang and Taiwan as a core security concern.

⁸ 1,768 kilometers (1,099 mi) long, the BTC oil pipeline, which connects Baku, the capital of Azerbaijan and Ceyhan, a port on the southeastern Mediterranean coast of Turkey, via Tbilisi, the capital of Georgia, was built by the Caspian Oil Consortium, and was backed by both Bill Clinton and George W. Bush, despite the fact that it was the most costly and least viable oil route out of the Caspian. The construction began in April 2003 and was completed in 2005. The first oil that was pumped from the Baku end of the pipeline on 10 May 2006 reached Ceyhan on 28 May 2006.

In addition, China has offered strong political, economic, and military aid, as well as advanced weaponry and technology, to those oil-rich countries, e.g. Iran, Sudan, Congo, Nigeria, Myanmar and Venezuela, which have had sanctions imposed on them by the U.S. for, among other things, sponsoring international terrorism, pursuing weapons of mass destruction, committing large-scale repression of democratic movements, committing human rights violations; all with an aim of securing energy resources. In particular, referring to Myanmar as its 'blood brother,' China has provided economic and military aid to the Myanmar military regime since 2003. Myanmar has been under severe U.S. sanctions for its oppression to human rights and democratic movements since 1997. China has also recently reinforced its military ties with Myanmar by building at least five military monitoring facilities and a naval base exclusively for Chinese warships in Myanmar, and completing the construction of the Sino-Myanmar oil pipeline. These measures can be seen as strategic moves against the U.S. military forces in the Strait of Malacca and the Taiwan Strait, in particular, and the U.S.'s China containment policy in general (Kim, S. J. 2012, 10).

Although the U.S. imposed sanctions on Sudan in 1997 due to the mass murders and rapes in Darfur, committed by the Sudanese military regime, China has not only provided weapons to Sudan, but also exercised its veto power on U.N. sanctions against Sudan (Kim 2007, 131). Similarly, after the U.S. issued an arms embargo against Venezuela in 2006, in retaliation for Venezuela's nationalization of its domestic natural resources, China invited Venezuela's President Hugo Chavez to Beijing and pledged to offer huge developmental aid to Venezuela in return for signing a contract for the joint oil development project in the Venezuelan northeast region (*The Guardian* 26 August 2006).

China has also been playing a key role in shielding Iran, which has been one of the major worries of the United States. Iran has not only been developing weapons of mass destruction, including nuclear weapons, but has also been attempting to undercut the U.S. dollar, the world's key currency, by accepting Eurodollars as payment for its oil exports. A similar step was attempted by Saddam Hussein in 2000. For many years, the U.S. has imposed sanctions against companies investing in Iran's energy sector in order to curb the financial sources for Iran's nuclear program. In early 2012, the U.S. announced the National Defense Authorization Act which included more stringent sanctions against Iran. However, unlike the EU which had expressed support for further U.S. sanctions, China publicly rejected the U.S. sanctions and expressed its firm commitment to continue its oil trade with Iran. Recently, the issue of whether to bring Iran into the SCO had been discussed, and if Iran became a member the U.S. efforts to isolate Iran would likely suffer a major blow (Douglas et al. 2007).

Given that China must be well aware of the fact that those oil-rich countries with strong anti-U.S. sentiments have been targeted by the U.S., China's continuing efforts to intentionally give political support, as well as economic and military aid, to those countries and to strengthen its diplomatic and military ties with them, can be seen as China's reaction to U.S. containment pressures. In short, the Sino-U.S. relations in the 21st century can be summed up by the U.S.'s actions to restrain and contain China's rise to great-power status and China's reaction to counter it, and as far as the issues around energy security are concerned, the same rules apply as evidenced by the continuing U.S. blockage of China's attempts at securing energy independence followed by China's extraordinary measures to secure its long-term energy supply. While the U.S. is attempting to maintain its monopolistic control over the global oil supply, China is trying to guarantee its own energy supplies by penetrating into the niche markets outside U.S. control.

To what extent China will continue to pursue aggressive and expansionistic energy diplomacy to achieve its energy security strategy, and to what extent the U.S. will tolerate such a strategy will be very interesting to watch. If China's energy demands on oil and natural gas continue to grow as rapidly as they do now, as well as their economic and military power, then it is doubtful that today's apparently peaceful relationship between China and the U.S. will continue in the future. The competition for energy procurement between the two countries is very likely to become much fiercer as China's economic and military strength grows rapidly in the future, and in light of the U.S. actions to curb China's energy procurement, diplomatic and military tensions between the two is likely to become increasingly heated potentially escalating into a military conflict, in the worst-case scenario.

It appears that the reason China's expansionistic energy procurement strategy and the U.S.'s China containment policy have not yet reached the stage of an all-out war is because China is using tactics to grow its national strength and wait for the right moment as its power is not yet strong enough to face off against the United States. But the possibility of diplomatic and military conflict between the two countries will rise if the competition for energy procurement intensifies and the scale of conflicts of interests around energy security expands tangibly.

Of course, some may argue that as the world's two largest producers and consumers of energy, as well as the largest greenhouse gas emitters, the U.S. and China face similar challenges in the energy field. Therefore they both have great potential for cooperation in various fields, e.g. the stabilization of global energy supply and prices, the reduction of greenhouse gas emissions, and the development of new energy resources (Pollack 2008, 440; Leiberthal and Herberg 2006). The two countries have had a number of meetings since the late 1980s, including the U.S.-China Energy Policy

Dialogue (2005), the U.S.-China Strategic Economic Dialogue (2006), and the U.S.-China Ten-Year Energy and Environment Cooperation Framework (2008) (Lewis 2012). Both nations also have a series of cooperation agreements on climate change, energy and environmental issues, such as the U.S.-China Memorandum of Understanding to Enhance Cooperation on Climate Change, Energy and the Environment, signed in 2009.

But despite the existing efforts for energy cooperation and dialogue between the two countries, there always exists a high possibility of diplomatic and military conflict, as evidenced by the history of the past 100 years, which clearly shows that nation states are inclined to rely on realist competition and conflict rather than liberalist cooperation and peaceful coexistence when it comes to energy procurement. As Yergin (1988, 112) argues, most political and military conflicts, such as maritime demarcation disputes, territorial contests, and armed clashes, between the world's great powers since the early 20th century have been fought for energy. For example, major political events that took place in the 20th century, including Japan's attack on Pearl Harbor in 1944, Germany's invasion of the Soviet Union beginning in 1944, the two oil crises in the 1970s, and the Gulf War in 1991, are all closely related to the control of oil (Jang 2008, 246). If China's economic growth and the growth of its energy demands lead to the increase of its defense capabilities, and it then challenges the U.S. military hegemony, a clash between nation states, caused by the resource nationalism we have seen in the past can take place again. Given that the both countries' dependency on oil is still extremely high relative to other energy resources and that another energy resource that can completely substitute for oil does not exist yet, it can be argued that the likelihood of such a clash is fairly high.

6. Conclusion

Since Samuel P. Huntington (1996; 1993) predicted that the U.S. and China would clash in the South China Sea in the 21st century, a number of commentators have put forward a similar prediction (Navarro and Autry 2011; Carpenter 2006; Babbitt and Timperlake. 2006; Klare 2002; Gertz 2002; Timperlake and Triplett II 2002; Manning 2000; Bernstein and Munro 1998). Much of the evidence so far indicates that these predictions may come true.

Being the world's largest energy consumer, the second largest oil consumer and importer, China has been pursuing its own energy security strategy since the late 1990s. In the process of actualizing the strategy, however, China has been increasingly inclined towards mercantilism, which stresses its national interests and security more than compliance with international norms or compromises with its counterparts. Furthermore, the Middle East, Africa, Central Asia, and Latin America, into which China has been actively penetrating to secure its own energy supplies, are where American influence has traditionally been strong, thus causing greater concern and anxiety on the part of the United States. The U.S., which has often advised China to resort to the international energy markets for dealing with China's energy supply problems, has reinforced its efforts to block overseas ventures by China's NOCs, thus fueling to the Sino-U.S. conflict around the issue of energy procurement. In short, the Sino-U.S. relations in the 21st century can be summed up by the U.S.'s actions to restrain and contain China's rise to great-power status and China's reaction to counter it, and as far as the issues around energy security are concerned, the same rule applies. While the U.S. is attempting to maintain its global hegemony through the monopolistic control over global oil supply, China is trying to be given guarantee of its own secure energy supply by somehow penetrating into the niche markets outside the U.S. control.

It will be interesting to watch to what extent China will continue to pursue aggressive and expansionistic energy diplomacy in the future in order to achieve the goal of its energy security strategy, and also to what extent the U.S. will tolerate such Chinese mercantilism. However, if China's energy demands on oil and natural gas continues to grow as rapidly as they do now, and if the country's economic and military power also keeps growing, then it is doubtful that the apparently peaceful relationship between China and the U.S. today will continue in the future. The competition for energy procurement between the two countries will likely be much fiercer as China's economic and military strength grows in the future, and during this process the U.S. will very likely increase its efforts to block and curb China's energy procurement strategy further, thus escalating diplomatic and military tensions between the two countries. If China's economic growth and the growth of its energy demands lead to the increase of its defense capabilities and then to its challenge to U.S. military hegemony, then the conflict between both nations will be inevitable.

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